

# Experiences of the Public Health Service in Training and Using Health Auxiliaries

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FOR BROAD planning purposes, we can project long-range trends in health manpower supply and demand. We have some understanding of social, economic, and intellectual changes, and we have limited indices for measuring the implications of these changes for health and health planning. What we see is a stunning set of contrasts.

On the one hand, there are the remarkable scientific and technological advances, which are not only providing new weapons for the conquest of disease but also are creating intense public expectations that this battle will be won. Bolstering these expectations is the level of U.S. productivity, which promises to make available the resources to provide quality health care to those who need it. To assure that those who need care obtain it, the people of the United States have made a social decision that financial barriers and barriers of race, creed, and cultural difference should not exclude anyone from receiving health care—a decision implemented in titles XVIII and XIX of the Social Security Act that Congress has enacted.

In contrast to our scientific and economic successes and people's expectations based upon

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them, we see, on the other hand, gross inadequacies in trained manpower. Professional health manpower is at present not only inadequate in quantity but in some instances so ineffectively used that the full opportunities of the professional are reduced and the hopes of the public are left unfulfilled. In an age when more effective treatment of illnesses is possible and when new proposals for facilitating the delivery of services are regularly put forward and enthusiastically discussed by planners and practitioners alike, a great many people in a great many communities believe that the existing avenues to care continue to be full of roadblocks. The quality of the care they receive falls short of their expectations. Yet spiraling hospitalization costs have increased the costs of hospitalization insurance until medical care has become a major item in the average family's budget.

The growing impatience and dissatisfaction with current health services is a measure of the acute public awareness of the difference between what is and what should be. Certainly we in the health professions, in the light of all the knowledge and experience at our command, cannot ignore the fact that some inequalities do indeed exist.

## Meeting Needs

Undoubtedly, the primary difficulties stem from shortages of resources, in particular the shortages of well-prepared and dedicated people who will protect health and assure normal de-

velopment as well as render care to the sick. Because we have had too little to work with, we have had to spread ourselves and our services too thin. The spread, however, is uneven among socioeconomic groups as well as geographically. Both the public and the professions recognize these inequities. And both understand that it is essential to shore up our manpower resources, not only in quantity but also in quality.

Out of this concern has come the Health Professions Educational Assistance Act. Upon the expansion of training facilities which will be realized through the nationwide school construction program, we can, over time, improve the availability of well-qualified men and women practicing the health professions. But it is unlikely that increasing the professional manpower supply will ever suffice in itself.

Because the adequacy of manpower resources is the foundation for everything we undertake in our society, the importance of continued efforts to strengthen these resources cannot be overstated. At the same time, it would be unrealistic to define adequacy solely in terms of the numbers of practitioners that the several professions command or the quantity of services these practitioners provide. The meaning of adequacy also derives, in large part, from the effectiveness with which the skills of practitioners are used.

Now effective use entails a great deal. It connotes an education which provides not only scientific knowledge and technical skills, but also an understanding of the force and direction of social change and of its impact on the lives of people and on professional responsibility and action.

Effective use involves such practical matters as the broader employment of existing and new types of health auxiliaries and the creation of new categories of skills. It also means the development of new working patterns and interrelationships—patterns which will permit both the professionals and the auxiliaries the greatest and most productive realization of their talents while assuring patients the finest quality of care.

Effectiveness also connotes relevance—the relevance that the prevailing modes of professional practice and the accepted systems for delivering health services have to the changing character and the changing needs of contem-

porary society. To be effective, inevitably we must be adaptable and continue our intellectual growth. Not only must health professionals exercise the sort of intellectual curiosity which leads them to determine the usefulness of advancing technology, such as computers in diagnosis or in national manpower inventories, but they must also be willing and able to adapt or redesign the pattern of their professional actions so that they can be reasonably sure they are serving the public's interests as well as their own. With that in mind, effective use must include an unremitting effort to assure the quality of all they undertake and, most certainly, the quality of the health care they provide.

Within this context, this paper reviews some experiences we in the Public Health Service have had in training and utilization of auxiliary

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**Community health representatives receiving field training at the Public Health Service Indian Hospital, Gallup, N. Mex.**

health workers in both hospital and community settings.

Several of our programs have involved such activities for a number of years. Much of this activity is direct; that is, the specific Public Health Service program actually funds, plans, and conducts the training activity, employs the worker at the end of training, and evaluates that training in terms of the worker's performance.

Other efforts of the Service in training auxiliaries are more indirect. We support health agencies and educational institutions which develop, conduct, and evaluate training for specified types of auxiliary health workers.

#### **Direct Public Health Service Programs**

Those programs which have been called "direct" were established to meet our immediate needs in providing health care to the legal beneficiaries of the Federal Government. The purposes of these training efforts are inward looking—not intended to relieve manpower pressures in the "larger world." Nevertheless, a specific intent is to create a model that can be

observed and replicated in the larger world if it seems beneficial.

In the staffing of the direct care programs which discharge our legal responsibilities for the provision of health care to designated groups such as merchant seamen, American Indians and Alaska Natives, selected members and dependents of the uniformed services, inmates of Federal prisons, Peace Corps volunteers, and employees of the Federal Government, we have conducted a wide variety of these auxiliary training programs.

In the Indian Health Service, the following 11 categories of auxiliaries are trained and used.

*Licensed practical nurses.* Since 1936 more than 1,100 Indian students have completed the course for practical nurses conducted at the Indian Health Service School of Practical Nursing in Albuquerque, N. Mex. Twenty-three students are currently in training. This 12-month program equips the students to perform routine nursing tasks under the supervision of a professional nurse, including giving treatments and administering certain medications.

*Licensed practical nurses (public health).*

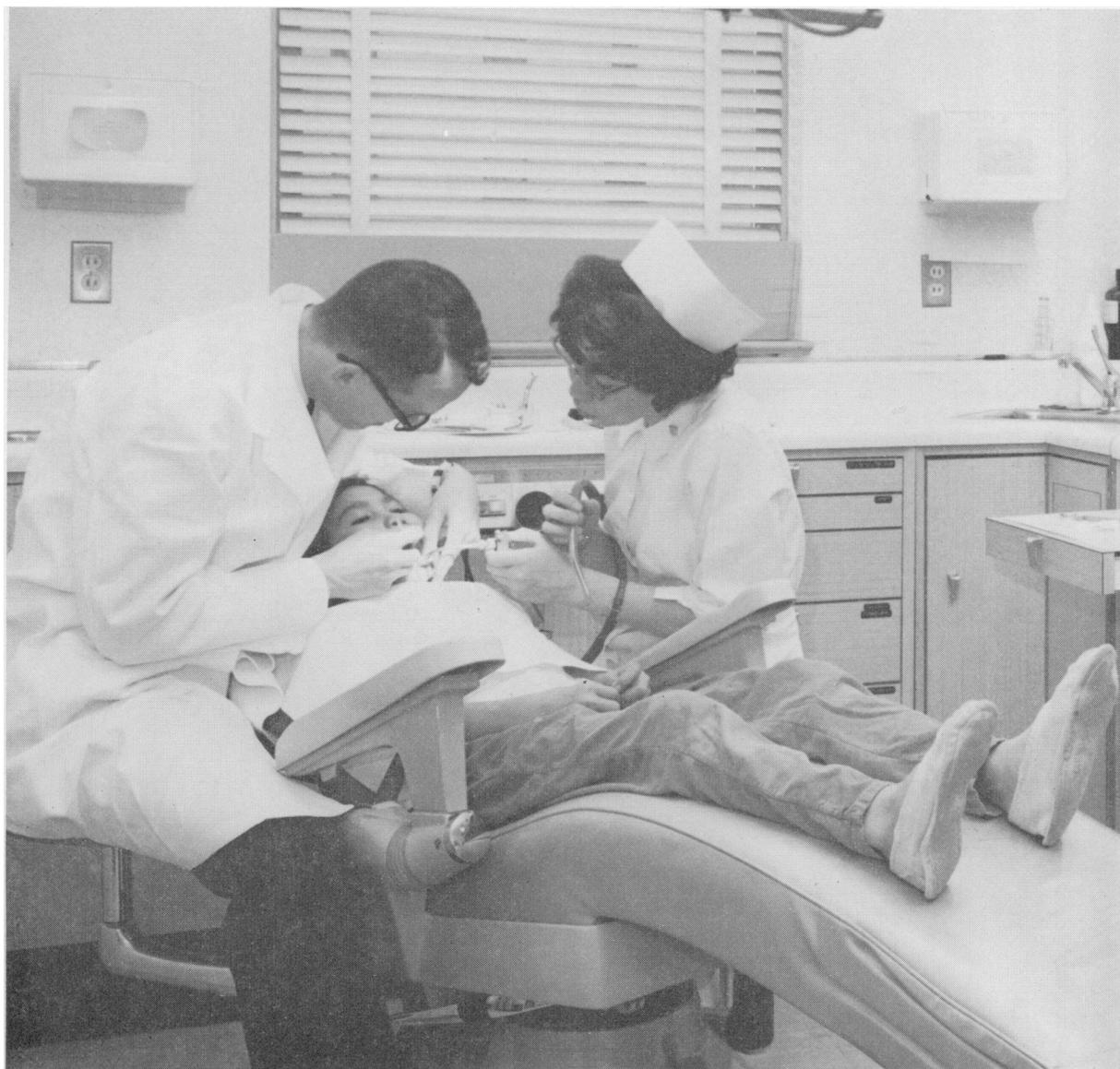
Eighty-six licensed practical nurses have been trained in public health since 1961 in 3-month supplemental training programs conducted at an Indian Health Service hospital in Shiprock, N. Mex. The training prepares these women to perform routine public health nursing functions in school health programs and field clinics and to make home visits to selected families.

*Licensed practical nurses (advanced clinical).* Since November 1963, a total of 164 licensed practical nurses have been trained in 3-month advanced training programs conducted at the Indian Health Service health facility in Rapid

City, S. Dak. This training prepares the licensed practical nurses to perform, under supervision, some of the more complex nursing procedures for acutely ill patients.

*Dental assistants.* A total of 142 dental assistants have been trained since 1962 in 10-month programs conducted at permanent schools in Lawrence, Kans., Brigham City, Utah, and Mt. Edgecumbe, Alaska. This training prepares the person to assist the dentist at chairside, provide laboratory service, maintain records, and develop X-rays, among other tasks.

*Sanitarian aides.* Since 1952, a total of 286



**Alaska Native dental assistant receives clinical training**

sanitarian aides have been trained in 1-month programs conducted in Sandia, N. Mex., and Phoenix, Ariz. These men are trained to carry significant responsibility in the general sanitation programs of their reservations, including aspects related to both inspection and education. The sanitarian aide training programs have now been transferred to the Indian Health Service Training Center in Tucson, Ariz.

*Alaska Native community health aides.* Formal training for Alaska Native community health aides was initiated as a pilot project in 1964 with 30 aides participating. From 1965 through 1967, about 90 aides received some form of organized training. In 1968, a permanent training site was established in Anchorage, where aides are brought in and given a 3-week course. Since then and through 1969, more than 200 aides will have received training. Upon completion of the training, the aides are employed by the Indian Health Service. These employees, unique to the Alaska situation, work under the direction of physicians via radio telephone. Ultimately, it is planned to have one aide per 200 population, or from one to three aides per village.

*Accredited record technicians.* The first class of nine accredited record technicians was graduated May 30, 1968. In 1969, 10 more record technicians will be graduated. Fifteen to 20 new record technicians will be trained each year. This program is conducted in conjunction with the Bureau of Indian Affairs. The students follow an associate degree course for accredited record technicians approved by the American Association of Medical Record Librarians. This 2-year program is presently conducted at the Phoenix College, Phoenix, Ariz. A similar program is being planned with Anchorage Junior College in Alaska.

*Community health representatives.* The Indian Health Service initially planned and conducted training for about 70 community health aides. The 70 aides were trained under pilot projects, funded by grants to the tribes from the Office of Economic Opportunity. The Indian Health Service, in 1968, established a permanent training site in Tucson, Ariz., and initiated the community health representative training program. As of June 30, 1969, 185 persons have been trained in this program.

This program represents a new and unique concept for provision of health services within the Indian Health Service. The position of community health representative provides for the first time a health auxiliary who is not an employee of the local, State, or Federal Government nor a representative of an outside agency. The representative is a tribal member residing within his (or her) tribal community. The community health representative is an employee of the tribal group that he represents and is responsible to that group.

The program is based on agreements between tribes or tribal groups and the Indian Health Service. A tribe drafts and submits a proposal for one or more community health representatives. Upon acceptance of the proposal by the Indian Health Service, funds are given to the tribe, which selects, hires, and supervises the employee or employees. The only stipulation is that the community health representative receive 4 weeks of basic training at the Indian Health Service training center at Tucson, Ariz., plus field training experience at an Indian Health Service Unit or at other health resources—State, county, city, or private. The Indian Health Service plans to train at least 200 community health representatives each year.

*Social work associates.* A training program for social work associates was initiated in 1968 with two trainees at Gallup, N. Mex., and two in Anchorage, Alaska. This program has a threefold purpose. It will give the professional Indian Health social worker another resource so that needed social services can be extended to more patients. Second, it provides a work and training experience for Indians and Alaska Natives. Third, it places these people on the beginning step of a career ladder leading to advanced social work practice and opportunities for higher education. The program is a 2-year apprenticeship, consisting of on-the-job training supplemented by additional schooling in a college or junior college. It is anticipated that 12 persons will be trained each year as social work associates.

*Medical laboratory and X-ray technicians.* A school for certified laboratory assistants was organized during 1968 at Gallup, N. Mex. The training consists of a 2-year program with both academic work and on-the-job training. As

of May 1969, six students were enrolled. It is expected that at least seven new technicians per year will be trained until the Indian Health Service's laboratory needs are met.

*Supervisory food service training.* Training of food service supervisors was begun in October 1968 at Santa Fe, N. Mex. The first class, of seven members, completed 4 months of training in February 1969. Plans call for conducting two classes a year with eight students per class. Training will also be extended to food service workers below the supervisory level.

In connection with auxiliaries, I cannot emphasize too strongly that the value of any auxiliary health worker is directly proportional to the quality of his training and the quality of his supervision. Quality training and quality supervision are essential. It is also essential to determine just what jobs the workers are to

do—and where—and to train them for the specific jobs. These precepts are so elementary that it is almost redundant to state them, yet we see all too many instances in which these obvious first steps have been forgotten or overlooked.

Not long ago, a number of newspapers carried an article concerning 1,000 persons who had been trained in health occupations under a poverty program activity, none of whom were found to be employable at the end of the training. The training agency either had not designed its training to meet the needs and interests of the employing agencies within the community or had not given the true demand for auxiliary manpower sufficient evaluation. The health industry cannot afford many such mistakes—either economically or politically.

Undoubtedly, a major reason for the success of the Indian Health Service in this business of



**Sanitarian aide learns to use engineering equipment at Sandia, N. Mex., school**

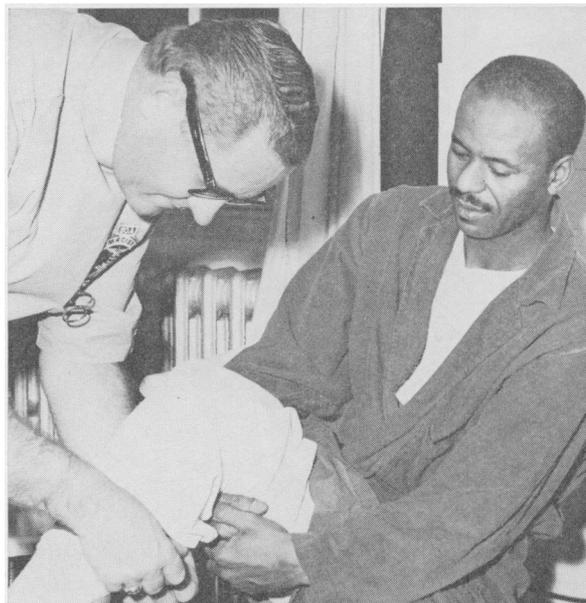
training and using auxiliary health workers is that its health care system promotes—in fact, demands—a careful determination of how auxiliaries will be used and how they will be supervised. Given this requirement, the determination of the content and the design of the training methodologies becomes self-evident.

What of some of the other programs such as the Federal Health Programs Service, formerly the Division of Hospitals? Like the Indian Health Service, this program trains principally to meet its own manpower needs. Training in 25 categories is currently underway.

Included in these 25 categories are such professional training programs as medical and dental internships and residencies and the post-graduate training of staff officers in nursing, pharmacy, physical therapy, and dietetics. Also included, however, are training programs for auxiliaries such as laboratory technologists and licensed practical nurses, plus a wide variety of training in the specific skills needed in the laundry, buildings and grounds, and housekeeping areas of hospitals. Many of the programs in the latter group are supported by the Office of Economic Opportunity. A 1968 inventory of professional and technical training in the Federal Health Programs Service disclosed a total of 173 affiliation training agreements, including 119 with universities, 30 with nongovernment hospitals, and 24 with other related medical training institutions.

*Housekeeping aides training course.* Recently the Public Health Service Hospital in Staten Island, N.Y., introduced a new training course for housekeeping aides directed at all incoming housekeeping employees as well as those already on the staff. Its purpose is to make the work of these employees more effective and thus improve the hospital's sanitation program. The course was presented 2 hours a day for 2 weeks and covered subjects to help the housekeeping aides to gain knowledge and develop skills related to their work. At its conclusion the trainees were given both a written and practical examination. This training course has been planned as a continuing activity at the hospital.

Undoubtedly, this study will have far-reaching effects in improving the delivery of health care. The results should give major impetus to the formulation of a logical method-



**Purser-pharmacist mate instruction on the dermatology service, Public Health Service Hospital, Staten Island, N.Y.**

ology for determining which health functions in which situations are best handled by which health worker.

*Purser-pharmacist mate training.* The Service's Staten Island hospital is engaged in training another type of worker which may be of interest, a "purser-pharmacist mate." This training, begun in 1966, is a cooperative effort of the Purser's Union, the Staff Officers' Association of America, the Department of Labor, and the Public Health Service. The course is designed to provide medical competency aboard vessels of the merchant fleet, vessels which traditionally have not had this capability. This ship's officer, being on independent duty, has only his own knowledge and skill, supported by radio communication with a Public Health Service Hospital medical officer, to serve the health needs of his vessel. The training course is of 9 months' duration and consists of 660 didactic instructional hours and 420 hours of practical experience. Graduates are certified by the U.S. Coast Guard as having met the standards necessary to qualify as a purser-pharmacist mate. As of June 1969, 86 graduates were serving aboard U.S. flag vessels.

Recently, a graduate of the first class of the pharmacist mate training school called at union

headquarters to clarify personal business and incidentally described some of the medical cases he had handled on his first trip as a pharmacist mate. He had treated a patient with hepatitis and a seaman with an infected appendix, both serious medical incidents. He told how he isolated the hepatitis patient, thus preventing the spread of a serious contagious disease, and how he cared for the man with appendicitis until he could be put ashore for an operation. The pharmacist mate chalked off both cases as routine, but actually both incidents proved the effectiveness of the pharmacist mate training.

Perhaps, however, the most important health auxiliary activity of the Federal Health Programs Service, in terms of long-term effects, is a joint effort underway with the Public Health Service's manpower program and the Department of Labor to develop a methodology for performing task analyses on the various health occupations. The health field has the only major occupations for which such analyses have never been done. As a result, there is apt to be little comparability in training programs offered in different places for the same job title and, since there is no uniform way of arriving at what tasks the job title calls for, no assurance that the training provided will qualify the person to meet the task requirements.

### **Model Program Concept**

To return for a moment to model programs. We believe that in the Public Health Service we have an excellent opportunity to serve a national need through our intramural laboratory capability.

By establishing a training program that can be observed at all times through an educational one-way mirror, we provide a mechanism for observation and critique of the content and methodology of the training. Such a training forum, under the scrutiny of the health profession, can serve the same kind of valuable need that is being met by certain West Coast pioneers in multiphasic screening, who encourage review of their methodologies by the health industry at large for possible replication where applicable.

This model is practical within the Service because the persons who are trained are trained only because of a reasoned and definitive need

and, once trained, are placed in an operating situation under supervision.

The Service has published a pamphlet entitled, "Training the Auxiliary Health Worker," in which the functions of the auxiliaries, the content and cost of their training, and the training facilities needed are analyzed. If training programs along these lines become more widespread, health manpower needs could be alleviated and health services improved.

### **Emphasis on Planning**

The skyrocketing of medical care costs, particularly for hospitalization, prompted the Public Health Service to conduct a program analysis study of health care facilities. Serving on the Program Analysis Committee on Health Facilities were staff experts of various agencies of the Department of Health, Education, and Welfare, who met with consultants from various health institutions including medical schools. One result of these meetings was the publication of a report by the Program Planning Office of the Service's Bureau of Health Services entitled "Program Analysis of Health Care Facilities" (1). This report presented 10 recommendations of the committee, in all of which planning, training, and education were stressed.

Another committee was appointed by the Secretary of Health, Education, and Welfare to study hospital effectiveness. Here, too, staff experts were called upon to meet with professional authorities in the field. The committee's conclusions were presented in a 1968 report entitled "The Report of the Secretary's Committee on Hospital Effectiveness," which likewise emphasized the need for better planning, among other recommendations (2).

### **Tasks for the Future**

Since the experts agree that the keystone in better utilization of health care facilities is improved planning, training, and education, it would follow that these elements are equally crucial in the utilization of health personnel. In addition, planning aimed at the most effective use of health manpower must also be responsive to changing knowledge and social changes and to the increasing expectations of health service consumers.

This review of what has already been done

by no means covers the entire range of efforts by the Public Health Service in auxiliary manpower development. I would like to review some of the things which it seems logical must still be done if we are to meet our immediate need for more health manpower. I believe we can agree that nothing is more important than using the existing manpower supply—professional, technical, and auxiliary—more effectively, and also examining carefully how our limited supply of health personnel now functions. The scarcity of health manpower must be viewed as both a national and a local problem, and the approach to its solution must be systematic, based on sound knowledge of the makeup of the health system and with the needs of the patient identified and kept paramount.

It would be well to plan in terms of adequately

training all auxiliary personnel, even the house-keeping aides, for the specific needs of each institution. Also, analysis and on-the-spot observation and experiment will enable us to identify those functions which can be performed satisfactorily by the technician or auxiliary worker under appropriate supervision.

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## **\$2.5 Million in Grants Awarded to 6 Comprehensive Health Projects**

Grants totaling more than \$2½ million have been awarded by the Health Services and Mental Health Administration, Public Health Service, to six comprehensive health services projects as follows: \$124,354 to the University of Miami, Coral Gables, Fla., for the Demonstration Project of Comprehensive Family Health Care in a Municipal Teaching Hospital; \$667,851 to the Meharry Medical College, Nashville, Tenn., for the Comprehensive Health Services Program; \$300,000 to the Community Health Care Center Plan, Inc., New Haven, Conn., for the Community Program for Prepaid Family Health Care; \$1,050,000 to the Hunts Point Multi-Service Center, Inc., Bronx, N.Y., for the People's Health Clinic; \$350,000 to the North East Neighborhood Association, Inc., New York, for the NENA Comprehensive Services; and \$400,000 to the Kate Bitting Reynolds Memorial Hospital, Winston-Salem, N.C., for the Community Health Center Program.

In keeping with the intent of the Partnership for Health Program under which these monies were awarded, the ultimate objective of these projects is to improve the general health of the target populations by making high-quality comprehensive health services available and ac-

cessible. All are designed to provide at least comprehensive family-centered primary care in their communities. More than 200,000 people will be served; the majority are low income or medically indigent, or both.

These projects are based on the concept of family-oriented primary health care. Health teams of professional and auxiliary personnel will provide a broad range of health services, linked to other local social, economic, and environmental services. Both the providers and consumers of these health services will participate fully in the development and operation of these projects.

Two of the projects, the Kate Bitting Reynolds Memorial Hospital in Winston-Salem, and the George H. Hubbard Hospital of Meharry Medical College in Nashville, are instituting a new concept in outpatient care through an innovatively organized hospital-based outpatient department. Unlike traditional out-patient clinics, comprehensive health services will be available on an appointment basis at these hospitals, and people will have their own family physician as head of a team concerned with all the patient's health needs. Both projects are also being coordinated with Model Cities programs in their areas.